DOCUMENT RESUME

ED 245 741 JC 840 358

AUTHOR Anandam, Kamala
TITLE Effectiveness of a Computerized Academic Alert System on Student Performance.
INSTITUTION Miami-Dade Community Coll., Fla.
PUB DATE Mar 84
NOTE 43p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; *Academic Advising; Academic Persistence; Community Colleges; Computer Oriented Programs; *Feedback; Grade Point Average; *Student Attitudes; *Teacher Attitudes; Two Year Colleges; Two Year College Students
IDENTIFIERS *Response System with Variable Prescriptions

ABSTRACT

A study was conducted at Miami-Dade Community College (MDCC) to assess the extent to which the college's computerized academic alert and advisement system, which advises students of their academic progress halfway into the term, affected the students' academic achievement. The study sought to determine the effects of the system on students' grade point average (GPA), and on the number of credits they completed and dropped, and to examine the strengths and weaknesses of the academic alert system as perceived by students and faculty. All credit students attending MDCC in fall 1983 were assigned to either an experimental or a control group. Academic alert letters were mailed only to the experimental group. An analysis of the records of 32,564 students revealed: (1) the term GPA of the experimental group was significantly higher than that of the control group; (2) the control group dropped significantly more credit than the experimental group; and (3) 1% fewer students in the experimental group were placed on probation than in the control group. A second component of the study involved interviews conducted with 154 students from the experimental group and 172 students from the control group to determine students' feelings about the advisement system. More than 75% of the students in each group claimed that the most helpful method of finding out about their progress was directly from their instructors, but the majority felt the mid-term progress letters should be continued. A final aspect of the study involved a survey of 856 faculty members. Of the 420 responding instructors, 31.2% felt the system should be continued for all students, 13.6% felt it should be continued for certain students, and 23.3% felt it should be continued with certain modifications. The survey instruments are appended. (HB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Effectiveness of a Computerized Academic Alert System on Student Performance

ED245741

by

Kamala Anandam
Director

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
K. ANANDAM

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
X Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

JC 840 358

Division of Computer-Based Instructional Development and Research
Miami-Dade Community College
11011 SW 104 Street
Miami, Florida 33176

ACKNOWLEDGMENTS

. . . to Maria Maspons - for performing the statistical analyses

. . . to Rose Anne Roche - for managing the Academic Alert System

. . . to Cathy Spencer - for preparing the report

. . . to Carol Cooper (MCC)
. . . to Ed Duffy (MWNWCC)
. . . to Karen Hays (SC)
. . . to Max Lombard (NC)
- for coordinating the Campus activities and updating the Academic Alert messages

TABLE OF CONTENTS

		Page
I.	Introduction	1
	Background Information	1
	Description of the Academic Alert and Advisement System	6
II.	Research Questions	7
III.	Experimental Investigation	9
	Method	9
	Assumptions and Limitations	10
	Students Included in the Statistical Analyses	11
	Analyses	11
IV.	Results	12
	Comparison of Term Grade Point Average (TGPA)	12
	Comparison of Cumulative Grade Point Average (CGPA)	15
	Comparison of Term Credits Dropped (TCD)	16
	Comparison of Cumulative Credits Dropped (CCD)	19
	Comparison of SOAP Status	20
	Comparison of Term Grade Point Average (TGPA) and Term Credits Dropped (TCD) with Reference to Midterm Progress Status	21
	Student Perceptions	23
	Faculty Perceptions	24
	Campus Analyses	27
V.	Discussion	28
VI.	Conclusions	31

APPENDIXES

A.	Academic Alert Progress Roll	33
B.	An Example of an Academic Alert Letter	34
C.	Student Interview Questionnaire	35
D.	Faculty Questionnaire	37

LIST OF TABLES

		Page
I.	Standards of Academic Progress (SOAP) Categories .	3
II.	Percentage of Students Placed in the Three Categories of Midterm Progress	8
III.	Analysis of Variance for Term Grade Point Average .	13
IV.	Mean Term GPA According to Groups, Enrollment Status, and Ethnic Category	14
V.	Mean Term GPA of the 2 Groups According to Enrollment Status and Ethnic Category	15
VI.	Analysis of Variance for Cumulative GPA	15
VII.	Mean Cumulative GPA According to Groups and Ethnic Category	16
VIII.	Analysis of Variance for Term Credits Dropped . . .	17
IX.	Analysis of Variance for Cumulative Credits Dropped	19
X.	Mean Cumulative Credits Dropped According to Ethnic Category	20
XI.	SOAP Status of Students Based on Term and Cumulative Performance	21
XII.	Mean Term GPA According to Midterm Progress Status.	22
XIII.	Mean Term Credits Dropped According to Midterm Progress Status	22

LIST OF FIGURES

1.	Illustration of Standards of Academic Progress	4
2.	Two-Way Interactions in Term Credits Dropped	18

Effectiveness of a Computerized Academic Alert System on Student Performance

I. INTRODUCTION

In recent years, institutions of higher education in the United States have begun to reexamine their goals and mission in the face of changing clientele, diminishing finances, increasing community demands, and declining public confidence. Their introspection has resulted in debates about selective vs. open admission, recruitment vs. retention, traditional vs. technological education, and education for all vs. education for each. While the debates will continue for some time and, no doubt, be influenced by political, social, economic, and technological forces, their resolutions will rest mostly on what the institutions actually do in the interim. Will they engage in coping strategies from one crisis to another, or will they take bold steps toward freedom from entanglements in dilemmas? This report describes the stance taken by one college--Miami-Dade Community College, Miami, Florida--and the actions and consequences that followed.

Background Information

Miami-Dade Community College opened in 1960 in temporary facilities with approximately one thousand students. Today the College has four campuses, offers educational programs in some two hundred other sites in the greater Miami area, and has a credit enrollment of approximately 40,000 and a total enrollment of some 58,000 students. Because of its fundamental realization that the

1980's require new directions and a different thrust in the administration of equity and quality in order to retain the open-door policy, Miami-Dade set forth a massive institutional change in 1978. The basic principles that governed this massive change were (1) to adequately monitor and inform students about their progess and potential problems and (2) to give more direction and support to students who need help.

A critical aspect of this institutional change was the implementation of Standards Of Academic Progress (SOAP). These standards basically require the students to meet two criteria, namely, to maintain a certain grade point average and to earn credit in at least half of the credits registered for. Both criteria, which pertain to cumulative (not current term) records, must be met. Since the expressions used in the SOAP definitions are specific to Miami-Dade, they are defined here:

Credits Registered	=	All credits registered for excluding student withdrawals with 100% refund.
Credits Earned	=	All credits for which a passing grade is earned. Passing grade is defined as A-C for General Education Courses and A-D for others.
Credits Attempted	=	Credits registered for minus student withdrawals after 100% refund date.
Grade Point Average	=	Sum of credits x point values of letter grades (A=4, B=3, C=2, D=1, F=0) divided by credits attempted.

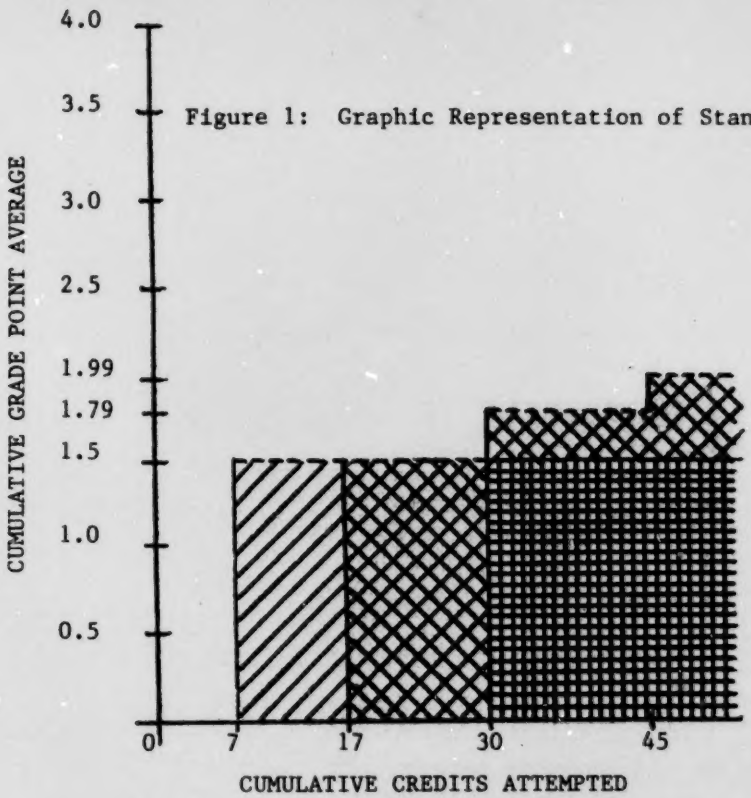
When the standards were implemented in 1978, the minimum required grade point average was 1.50 to avoid warning, probation, or suspension. Since then, the standards have been revised a few times to what they were in Fall, 1983-84, as shown in Table I and illustrated in Figure 1. These new standards have had a dramatic

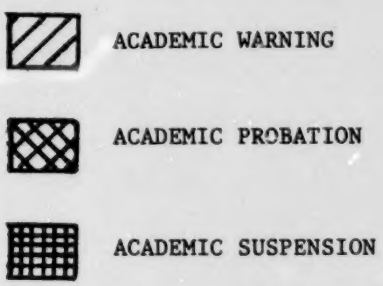
Table I

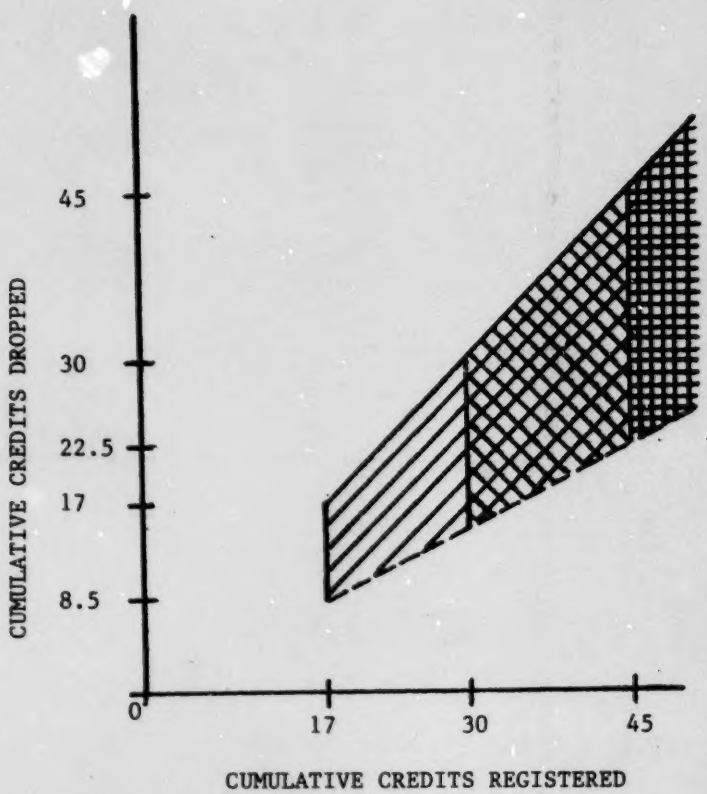
Standards of Academic Progress Categories

7-16.9 cumulative credits attempted with less than a 1.5 cumulative grade point average (GPA) (GPA determined by courses completed--passed or failed)	Academic Warning
17-29.9 cumulative credits registered for but credit earned in fewer than half (All courses completed--passed, failed, or grades of "W")	
17-29.9 cumulative credits attempted with less than a 1.5 cumulative grade point average	
30-44.9 cumulative credits attempted with a cumulative grade point average between 1.50-1.79	Academic Probation
45+ cumulative credits attempted with a cumulative grade point average between 1.50-1.99	
30-44.9 cumulative credits registered for but credit earned in fewer than half	
30+ cumulative credits attempted with less than a 1.5 cumulative grade point average	Academic Suspension
45+ cumulative credits registered for but credit earned in fewer than half	

Figure 1: Graphic Representation of Standards of Academic Progress







impact on Miami-Dade. Since their implementation in Fall, 1978, the College has suspended 12,834 students for lack of sufficient academic performance as opposed to none being suspended in previous years.

At the time of introducing the new standards, the College made a firm commitment to provide better services to its students and thus prevent their suspension. If the Standards of Academic Progress were to stamp the students with a seal of approval/disapproval at the end of a term based on their cumulative credits and grades earned, surely a way would have to be found to alert the students halfway into the term about their progress and advise them accordingly; so felt Miami-Dade's Faculty Senate, and so was it done. Of course, drawing up a policy for academic standards and working out methods to implement those standards represent one side of the coin, merely an administrative responsibility, albeit an enormous one. The other side of the coin--a horrendous task encompassing preventive measures to alert the students about impending problems and help them correct the situation--stands for the moral obligation of the institution to its students. The institutional expression of its moral obligation was the initiation of the computerized system of Academic Alert and Advisement. It is truly institutional because administrators, faculty members, advisors, and support personnel are involved in making this system a viable tool to reach all students enrolled for credit at Miami-Dade.

Description of the Academic Alert and Advisement System

At midterm, **all** faculty members, full-time and part-time, complete a progress roll (Appendix A) to provide information on two questions: how is the student performing halfway into the term ("satisfactory," "improvement needed" or, in the case of independent study courses, "can't tell")? and how well does the student attend classes ("satisfactory," "not satisfactory," "no show," or "does not apply")? This information is then combined with other student data such as credit load, previous performance, native language, age, basic skills test scores, etc. to generate highly personalized printed reports to approximately 40,000 students enrolled for credit at Miami-Dade. While the existing computer files for registration, transcripts, and test scores provide the student data, a sophisticated computer system called RSVP (**R**esponse **S**ystem with **V**ariable **P**rescriptions) is used to individualize the alert and advisement messages in what is popularly called an RSVP letter. (See an example in Appendix B.)

There are, in all, 150 different messages written for each of the four campuses. Out of this pool, RSVP selects the appropriate messages according to decision rules programmed into the system. The possible combinations of the messages in students' letters add up to well over 26,800. In other words, the system can generate 26,000 or more unique letters if students' information is equally unique.

Beginning with 9,706 students who entered Miami-Dade in Fall, 1978-79, the system was expanded to include **all** credit students in Fall, 1980-81. Thus far, the system has been implemented for eleven major (fifteen-week) terms. The percentage

of midterm progress rolls returned by the faculty members for those eleven terms began at 90% and stabilized at 98% in the end. The percentage of students placed in the three categories of progress ("satisfactory in all courses," "improvement needed in some or all courses," and "no information in any course") are summarized in Table II. During the eleven terms, efforts were made to increase the percentage of progress roll returns and decrease the percentage of students in the "no information" category. Mention should be made here that even though about 98 percent of the faculty usually returned the progress rolls, some of the rolls were not completed for all the students. If this happened to a student for all the courses in which he/she was enrolled, that student was placed in the "no information in any course" category.

II. RESEARCH QUESTIONS

An experimental study was conducted in Fall Term, 1983-84, to assess the effectiveness of the Acaemic Alert System. As mentioned earlier, the system was instituted primarily to inform all the students halfway into the term about their progress in each and every course they were enrolled in and to alert them, if necessary, about potential problems relative to the Standards of Academic Progress (SOAP). Since the SOAP was contingent upon Cumulative Grade Point Average and the ratio of Cumulative Credits Earned to credits registered for, ideally the investigation should begin with a cohort of new students and follow them through several terms to determine the impact of the Academic Alert System. This experimental study is intended to

Table II

Percentage of Students Placed in the Three Categories of Midterm Progress from 1978 to 1983

Year	Fall Term			Winter Term		
	Satis-factory	Improve-ment Needed	No Infor-mation	Satis-factory	Improve-ment Needed	No Infor-mation
1978-79	40%	43%	17%	45%	40%	15%
1979-80	47%	37%	16%	50%	36%	14%
1980-81	50%	34%	16%	52%	38%	10%
1981-82	52%	39%	9%	53%	42%	5%
1982-83	51%	42%	6%	52%	43%	5%
1983-84	49%	43%	8%			

serve as an exploratory investigation to set the stage for future study. Therefore, the following questions were selected for the investigation.

1. Does the Academic Alert System

   a) improve the Term Grade Point Average (TGPA)?
   b) improve the Cumulative Grade Point Average (CGPA)?
   c) reduce the Term Credits Dropped (TCD)?
   d) reduce the Cumulative Credits Dropped (CCD)?
   e) reduce the number of students placed on SOAP?

2. How does the Academic Alert System affect the TGPA and TCD of students relative to their midterm progress?

3. What are the strengths and weaknesses of the Academic Alert System as perceived by the students and faculty members?

III. EXPERIMENTAL INVESTIGATION

Method

All phases of the Academic Alert System took place as usual. That is, midterm progress rolls were printed for **all** credit students, faculty members completed those progress rolls as usual, and the RSVP computer file was updated for **all** the credit students. However, in the RSVP file, all credit students were randomly divided into two groups: (1) the experimental group and (2) the control group. The Academic Alert letters were mailed out only to the students in the experimental group. After the RSVP file was updated for the end-of-term data on grade point average and credits registered for, earned, dropped, and attempted, analyses were carried out to determine the grade achievement and course completion. In order to determine the students' perception of the Academic Alert System, 400 students (1% of the total population) were randomly selected (200 each from the

experimental and control groups) for telephone interviews. An additional 100 students (50 from each group) were randomly selected as back-ups if any of the original 400 students could not be reached. Six persons spent a total of seventy-two hours during the period October 24 - November 11, 1983, to conduct the telephone interviews. The interview questionnaire and instructions are shown in Appendix C. During the same period that students were interviewed over the phone, faculty questionnaires (Appendix D) were distributed to all full-time faculty members to determine their perceptions of the Academic Alert System.

Assumptions and Limitations

The present study attempts to investigate the effectiveness of mailing out individualized midterm progress letters to students based on information provided by the faculty. Inherent in this process are some unavoidable assumptions such as the following: 1) **all** the faculty members complete the progress rolls with equal seriousness; 2) **all** the students receive, read, and understand the letters; and 3) there is sufficient time for the students to catch up with their work if improvement is needed.

The treatment variable being evaluated in this study is a one-shot intervention (one progress letter halfway into the term) with no continuation of the treatment over a period of time. Consequently, the impact of this intervention technique needs to be captured through analyses of objective as well as subjective data.

Students Included in the Statistical Analyses

At midterm when the Academic Alert letters were generated, students who had dropped all their courses for the term, students who had an "address hold" code in their college records, students whose letters were returned for one reason or another, and students in the control group who asked for their letters were excluded from the study. The number of students thus selected for the study was 39,633. In addition, students whose midterm progress was given as "satisfactory" in courses reported, but for whom "no information" was reported in others, were excluded from the analyses since there was no way to determine whether the students' performance in the unreported courses was satisfactory or not. The number of students thus excluded was 6,832. Also, 237 students who had dropped all courses since midterm were excluded from the analyses. After all the exclusions, the records of 32,564 students were analyzed in this study.

Analyses

Analysis of variance was used to compare the two groups (experimental and control) in terms of Term Grade Point Average (TGPA), Cumulative Grade Point Average (CGPA), Term Credits Dropped (TCD), and Cumulative Credits Dropped (CCD). The enrollment status (new or continuing) of the students and the ethnic categories (white non-hispanic, black non-hispanic, and hispanic) were included as factors in the analyses of variance. Additional 't' tests were performed to compare the TGPA, CGPA, TCD, and CCD of the experimental and control groups in the three

categories of midterm progress, namely, "satisfactory progress," "improvement needed," and "no information." The SOAP status (academic warning, probation, suspension) of the two groups was compared in terms of the percentages of students placed under SOAP. Students' and instructors' responses to their respective questionnaires were tabulated in terms of frequency counts and percentages.

IV. RESULTS

Comparison of Term Grade Point Average (TGPA)

Analysis of variance was performed using students' enrollment status and ethnic category as factors in comparing the TGPA of the experimental and control groups. Students were classified as "new" or "continuing" for enrollment status and as "white non-hispanic," "black non-hispanic," and "hispanic" for ethnic category. A total of 589 students whose ethnic category was other than the three mentioned above were not included in this or other analyses that used ethnic category as a factor. The analysis of variance results for Term Grade Point Average (TGPA) are presented in Table III.

Table III

Analysis of Variance for Term Grade Point Average

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	'F' Value
Main Effects				
Groups	9.50	1	9.50	6.766**
Enrollment	202.41	1	202.41	144.207**
Ethnic	1413.96	2	706.98	503.696**
2-way Interactions				
Groups x Enrollment	0.59	1	0.59	0.418
Groups x Ethnic	6.47	2	3.24	2.305
Enrollment x Ethnic	0.77	2	0.38	0.275
3-way Interactions				
Groups x Enrollment x Ethnic	0.53	2	0.26	0.188
Residual	39,872.98	28,408	1.40	

** Significant at .01 level of confidence

As far as TGPA is concerned, none of the interactions was statistically significant, which means that the treatment effect was uniform across the two factors (enrollment status and ethnic category). In this case, the treatment was the Academic Alert letters for the experimental group and their absence for the control group. The statistically significant 'F' value for groups indicates that the TGPA of the experimental group was significantly different (in this case higher, as shown in Table IV) from that of the control group. In addition, the significant 'F' values for enrollment status and ethnic category indicate that the students' TGPA's were significantly different along these factors as well. The mean TGPA's are shown in Table IV according to groups, enrollment status, and ethnic category.

Table IV

Mean Term GPA According to Groups, Enrollment Status, and Ethnic Category

Status	N	Mean TGPA	Standard Deviation
Groups			
Experimental	14,157	2.32	1.20
Control	14,263	2.28	1.21
Enrollment			
New	6,942	2.16	1.27
Continuing	21,478	2.34	1.18
Ethnic			
White non-hispanic	8,920	2.60	1.21
Black non-hispanic	4,347	1.97	1.15
Hispanic	15,153	2.21	1.19

The consistency of group effects across new and continuing students and across the three ethnic categories, despite the significant difference within the enrollment status and ethnic category, is clearly observable in Table V. As in other analyses, the numbers for ethnic category exclude those who did not belong to one of the three categories shown in Table V.

Table V

Mean Term GPA of the 2 Groups According to Enrollment Status and Ethnic Category

Status	Experimental Group			Control Group		
	N	Mean TGPA	SD	N	Mean TGPA	SD
Enrollment						
New	3,451	2.19	1.27	3,624	2.14	1.27
Continuing	10,966	2.36	1.17	10,927	2.32*	1.19
Ethnic						
White non-hispanic	4,409	2.61	1.20	4,511	2.58	1.21
Black non-hispanic	2,165	2.02	1.14	2,182	1.92**	1.16
Hispanic	7,583	2.22	1.18	7,570	2.20	1.19

*Significant at .05 level of confidence
**Significant at .01 level of confidence
SD = Standard Deviation

Comparison of Cumulative Grade Point Average (CGPA)

The results of the analysis of variance for Cumulative Grade Point Average (CGPA) are presenated in Table VI. Since Term GPA and Cumulative GPA represent the same data for new students, only continuing students are included in this analysis.

Table VI

Analysis of Variance for Cumulative GPA

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	'F' Value
Main Effects				
Groups	0.95	1	0.95	1.465
Ethnic	617.90	2	308.95	475.071**
2-way Interactions				
Groups x Ethnic	0.14	2	0.07	0.107
Residual	15,717.67	24,169	0.65	

**significant at .01 level of confidence

There was no significant interaction between the two groups and ethnic categories for CGPA, nor was there a significant difference between the two groups. Only the main effects for ethnic category were significant, which means that the students in the various ethnic categories were significantly different in their CGPA's. The mean CGPA's for the groups and the ethnic categories are presented in Table VII.

Table VII

Mean Cumulative GPA According to Groups and Ethnic Category

Status	N	Mean GPA	Standard Deviation
Groups			
Experimental	12,106	2.46	0.83
Control	12,069	2.45	0.82
Ethnic			
White non-hispanic	7,295	2.67	0.83
Black non-hispanic	3,846	2.20	0.78
Hispanic	13,034	2.42	0.80

Comparison of Term Credits Dropped (TCD)

The analysis of variance results for the Term Credits Dropped (TCD) are presented in Table VIII.

Table VIII

Analysis of Variance for Term Credits Dropped

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	'F' value
Main Effects				
Groups	0.03	1	0.03	0.003
Enrollment	2,654.60	1	2,654.60	282.646**
Ethnic	6,199.68	2	3,099.84	330.052**
2-way Interactions				
Groups x Enrollment	40.35	1	40.35	4.296*
Groups x Ethnic	79.76	2	39.88	4.246**
Enrollment x Ethnic	936.38	2	468.19	49.850**
3-way Interactions				
Groups x Enrollment x Ethnic	2.25	2	1.13	0.120
Residual	300,195.38	31,963	9.39	

*Significant at .05 level of confidence
**Significant at .01 level of confidence

As can be seen from Table VIII, all three two-way interactions were statistically significant, which means that the treatment effects were not uniform across the two factors (enrollment status and ethnic category). Figure 2, illustrating the interaction effects graphically, indicates that 1) new students drop more credits than do continuing students (Figure 2a), with the discrepancy being the largest for black non-hispanics; 2) new students in the experimental group drop more credits than those in the control group (Figure 2b), while the opposite is observed for the continuing students; and 3) hispanics in the experimental group drop fewer credits than their counterparts in the control group (Figure 2c), while the reverse is true for the white non-hispanics and black non-hispanics.

Figure 2: Two-way Interactions in Term Credits Dropped

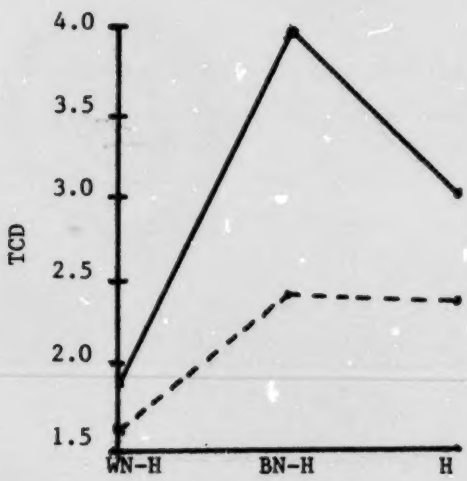


Figure 2a

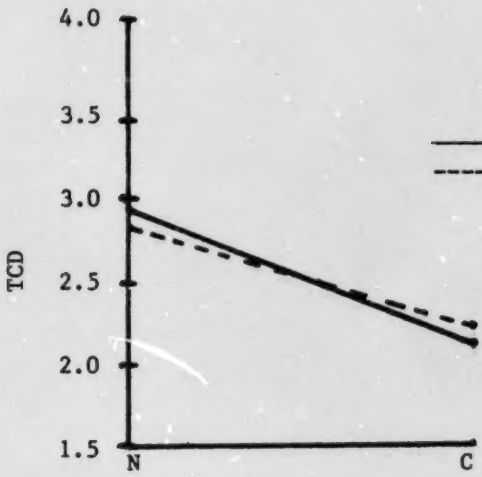


Figure 2b

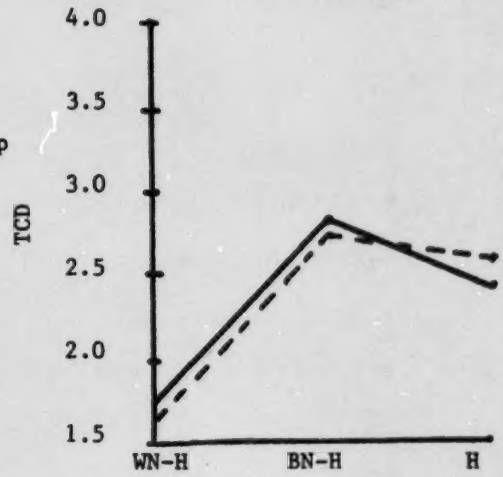


Figure 2c

TCD = Term Credits Dropped
WN-H = White non-hispanic
BN-H = Black non-hispanic
N = New
C = Continuing

Comparison of Cumulative Credits Dropped (CCD)

The results of analysis of variance for Cumulative Credits Dropped (CCD) are presented in Table IX. The new students are excluded from this analysis since their cumulative data are identical to their term data.

Table IX

Analysis of Variance for Cumulative Credits Dropped

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	'F' Value
Main Effects				
Groups	356.56	1	356.56	2.297
Ethnic	63,817.41	2	31,908.70	205.530**
2-way Interactions				
Groups x Ethnic	171.68	2	85.84	0.553
Residual	3,752,260.00	24,169	155.25	

**Significant at .01 level of confidence

As can be seen from Table IX, there were no significant interaction effects or main effects for groups. The ethnic category was, however, significant. The mean CCD for the groups and three ethnic categories are shown in Table X.

Table X

Mean Cumulative Credits Dropped According to Ethnic Category

Status	N	Mean CCD	Standard Deviation
Groups			
Experimental	12,106	12.69	12.69
Control	12,069	12.93	12.48
Ethnic			
White non-hispanic	7,295	10.52	11.80
Black non-hispanic	3,846	15.15	13.54
Hispanic	13,034	13.40	12.51

As can be seen from Table X, there was greater drop activity in the control group than in the experimental group and in the black non-hispanics than in the other two categories in terms of CCD.

Comparison of SOAP Status

The number and percentage of students placed on SOAP (academic warning, probation, or suspension) in the experimental and control groups are presented in Table XI. The placement for Cumulative Performance is based on the cumulative GPA and cumulative credits registered for, attempted, and earned as maintained in the College's records, and the placement for Term Performance is based on term GPA and term credits registered for, attempted, and earned. The latter was especially computed for this study. Since the students could not be placed on SOAP unless they had registered for a minimum of 17 credits or had attempted at least 7 credits, those students who did not meet these minimum requirements were excluded from this analysis.

Table XI

SOAP Status of Students Based on Term and Cumulative Performance

Criteria	Experimental		Control	
	Potential Number	Number on SOAP	Potential Number	Number on SOAP
Term Performance	6,812	1,274 (19%)	6,907	1,367 (20%)
Cumulative Performance	13,607	2,687 (20%)	13,724	2,712 (20%)

While one percent fewer students were placed on SOAP in the experimental group based on Term Performance, there was no difference between the two groups when Cumulative Performance was considered.

Comparison of Term Grade Point Average (TGPA) and Term Credits Dropped (TCD) with Reference to Midterm Progress Status

The midterm progress status of students was classified in the Academic Alert System as "satisfactory in all courses," "improvement needed in some or all courses," and "no information in any course." According to these classifications, the mean TGPA's of the experimental and control groups were compared using a 't' test. The results are presented in Table XII. As mentioned earlier, 6,832 students with partial information (satisfactory in courses reported) were excluded from this comparison.

Table XII

Mean Term GPA According to Midterm Progress Status

Midterm Progress Status	Experimental Group N	TGPA Mean	TGPA SD	Control Group N	TGPA Mean	TGPA SD	't' value
Satisfactory	6,285	2.85	1.03	6,278	2.83	1.04	1.05
Improvement Needed	7,011	1.86	1.09	7,074	1.81	1.10	2.63**
No Information	1,121	2.18	1.47	1,199	2.19	1.48	-0.17

**significant at .01 level of confidence SD = Standard Deviation

As can be seen from Table XII, providing information ("satisfactory" or "improvement needed") on students' progress at midterm results in higher TGPA's for the experimental group than for the control group.

The mean Term Credits Dropped (TCD) of the experimental and control groups according to the midterm progress classifications are presented in Table XIII.

Table XIII

Mean Term Credits Dropped According to Midterm Progress Status

Midterm Progress Status	Experimental Group N	TGPA Mean	TGPA SD	Control Group N	TGPA Mean	TGPA SD	't' value
Satisfactory	6,806	1.32	2.18	6,878	1.60	2.22	NS
Improvement Needed	8,026	3.34	3.44	8,062	3.34	3.42	NS
No Information	1,361	1.89	2.92	1,431	1.84	2.96	NS

NS=not significant SD = Standard Deviation

There was no significant difference in TCD between the two groups according to the students' midterm progress status.

Student Perceptions

The six interviewers succeeded in completing telephone interviews with 154 students (77%) in the experimental group and 172 (86%) in the control group. All 100 students selected as back-ups were substituted for the students in the original samples who could not be reached.

More than three-fourths of the students in each group claimed that the most helpful method to find out how they are doing is to get that information directly from their instructors. However, to the question: "Do you feel you have been informed of your progress during the term?" more students in the experimental group (62%) responded in the affirmative than in the control group (53%).

In both groups, an overwhelming majority of the students who have been exposed to midterm progress letters either during this term or in previous terms (91% in the experimental group and 80% in the control group) felt that the College should continue to send the midterm progress letters. The formality of reporting the midterm progress was given as the primary reason for their recommendation to continue the Academic Alert System.

Faculty Perceptions

Of the 856 questionnaires distributed, 420 (49%) were returned. By campus, the percentage of returns is as follows:

	Full-Time Faculty	Questionnaires Returned	% Returned by Campus
North	308	152	49.4%
South	341	166	49.8%
MMMCC	121	57	47.1%
MCC	86	45	52.3%

By discipline, the distribution of the faculty who returned the questionnaires was as follows:

	Number	Percent of Total
Humanities	67	16%
Science	85	20%
Social Science	45	11%
Business	37	9%
Technical	35	9%
Allied Health	28	7%
Developmental Studies	22	5%
Data Processing	11	3%
Others	90	21%
Total	420	

A majority (66%) of the faculty members returning the questionnaire had completed more than 10 years of teaching at the College; eighty percent (80%) taught both new and continuing students; and 73% had participated in the Academic Alert System for all the eleven terms that the system was implemented.

As to whether or not the College should continue the Academic Alert System, the recommendations of the faculty members were as follows:

	Number	Percent	
Continue as is for all students	131	31.2%	
Continue as is for certain students	57	13.6%	
			68.1%
Continue with modifications for all students	42	10.0%	
Continue with modifications for certain students	56	13.3%	
Discontinue	120	28.6%	
No response	14	3.3%	

In the faculty members' responses to the open-ended questions on the strengths and weaknesses of the Academic Alert System, the phrase "certain" students used in the preceding summary seemed to point to the students who need improvement in their performance, but there was no clear indication of the kind of modifications that are necessary. Their responses seemed to suggest that the midterm letters should offer more specific help.

The major strengths of the Academic Alert System as seen by the faculty members were as follows:

	Number	Percent
Opens communication about students' progress	185	54.0%
Shows concern of instructor and college	38	11.0%
Offers students an opportunity for self-evaluation	29	8.4%

The major weaknesses of the system as reported by the faculty members were as follows:

	Number	Percent
Does not offer specific evaluation or specific help	93	27.0%
Does the job of instructor, wasting time and money unnecessarily	89	25.9%
Requests information too early in the semester, thus forcing subjective judgment	59	17.2%

The free responses of the faculty members reflected highly positive and some negative perceptions of the Academic Alert System. For the benefit of the reader, some examples of those perceptions are quoted next. On the positive side, the comments were as follows:

1) "My perception of the Academic Alert System is that if students understand what it means to them, the system may provide a valuable expression on the part of the school regarding the progress of the student through various courses."

2) "While I occasionally despair of reaching some students who lack the necessary motivation to pursue their academic involvement in courses, I welcome any help the school may provide."

3) "The main strength is the ability to communicate with and advise each student according to his or her individual needs, a privilege only afforded by the most prestigious and selective universities in the country!"

4) "It is an alert. It is one of the best forms of school-student communication we have at Miami-Dade. It should continue - absolutely!"

On the negative side, the comments were as follows:

1) "Some faculty do not conscientiously participate."

2) "System probably costs more than it's worth."

3) "Any student who is that immature and unaware of his or her academic status in courses has no business doing college level work."

4) "I think it's bull---- anyway. It is unnecessary and a waste of my time. Students should be able to keep track of their own grades."

5) "I strongly recommend that this particular computer toy be junked."

For the question: "Did your students ask for clarification of their Academic Alert letters?" 54% of the faculty members said that their students did not; 34% said that fewer than five percent of their students inquired about their letters; and 11% said that more than 5% of their students talked about their letters.

Campus Analyses

The analyses of data for each of the four campuses were conducted with the same criteria and tests as were the analyses of the College data. The results for the campuses were in the same direction as for the College. Mean Term GPA and Cumulative GPA were higher for the experimental groups on all four campuses. Term GPA was statistically significant for Medical Center and Mitchell Wolfson New World Center Campuses. The interaction effects between enrollment status and ethnic category for Term Credits Dropped were substantial on all four campuses. That is, new and non-hispanic blacks dropped credits much more than others during the term. Based on Term GPA and Term Credits Dropped, more students in the experimental groups than in the control groups on each of the four campuses were in the "clear" for SOAP. The percentage difference was not carried over to the students' SOAP status based on Cumulative GPA and Cumulative Credits Dropped.

V DISCUSSION

The results of an experimental study completed in Fall, 1983-84, to determine the effectiveness of a computerized Academic Alert System are presented in the foregoing section. A total of 32,564 students included in this study were randomly assigned to the experimental or control groups. Individualized Academic Alert midterm letters were mailed out only to the students in the experimental group. Based on the results, the outcome of the study can be interpreted as follows:

1. The new and continuing students differed significantly in their academic performance, the latter doing better than the former. This is not surprising since better-performing students are more likely to continue their academic pursuits, and the College's Standards of Academic Progress (SOAP) suspend those students who do not meet the established standards.

2. Students in the three ethnic categories (white non-hispanic, black non-hispanic, and hispanic) also differed significantly from one another in their GPA's.

3. Despite the above-mentioned differences in the student population, the students in the experimental group achieved significantly higher Term Grade Point Averages than those in the control group. This was true for new and continuing students and for white non-hispanic, black non-hispanic, and hispanic students. However, the greatest difference in the mean Term GPA's between the experimental and control groups was observed in the black non-hispanic students.

4. The effects of the Academic Alert System were not uniform for Term Credits Dropped across new and continuing

students or across white non-hispanic, black non-hispanic, and hispanic students. New students dropped more credits and continuing students dropped fewer credits in the experimental group than in the control group. Perhaps the new students are less aware of the effect of dropping a course on their SOAP standing. When the ethnic categories of students are considered, white and black non-hispanics dropped more credits in the experimental group than in the control group and the reverse was true for the hispanics. Regardless of the groups, new black non-hispanic students dropped the greatest number of credits. In a way, the drop activities in the experimental group may very well have accounted for its higher Term Grade Point Average. Therefore, the success of the Academic Alert System in the coming years will depend on reducing the drop activities. The Academic Alert messages now address this issue only if the students have dropped course(s) prior to midterm progress. Perhaps, when reporting the midterm progress, the messages can be tailored to address this issue explicitly according to the enrollment status and ethnic categories of the students. The explicitness is important since the messages as worded presently in all likelihood imply a suggestion to drop a course in which a student is not doing satisfactorily.

5. The Cumulative Grade Point Average was higher and the Cumulative Credits Dropped were fewer for the experimental group than for the control group, but the differences were not significant. What stands out as the variable that accounts most for the difference amongst the students is their ethnic category.

6. There was a one-percent difference between the experimental and control groups in terms of the number of students who were placed on SOAP. This difference, based on Term Grade Point Average and Term Credits Earned, disappears when cumulative performance is considered. If the drop activities could be reduced through the advice and assistance provided in the Academic Alert System, one might expect to see some improvement in the SOAP status of the students. For example, while the SOAP data was examined, it was observed that out of the 1,546 students who were placed in the SOAP categories dealing with excessive withdrawals, 37% had a Cumulative Grade Point Average of 2.00 - 2.99, 7% had a CGPA of 3.00 - 3.99, and 1% had a CGPA of 4.00. This presents an intriguing situation for the College concerning the students who might decide that it is better to drop a course than get a poor grade. In making this decision, the students may or may not be cognizant of the effect on their SOAP standing. In any case, from the students' perspective, such a decision is wise, yet they get penalized for it. If there is some way to determine which students tried to meet the work requirements of the course but decided to drop it in the end because they could not meet the grade requirements, perhaps a distinction could be made between this withdrawal and another withdrawal that might reflect the behavior of a procrastinator.

7. The students in the experimental group who were informed at midterm that their progress either was "satisfactory" or "needed improvement" achieved better Term Grade Point Averages than their counterparts in the control group. This was not the case for the students who were told that there was "no

information" for any of the courses. This outcome supports the usefulness of the Academic Alert System.

8. Finally, both students and faculty support the idea of continuing the Academic Alert System. More students in the experimental group than in the control group claimed that they were well informed about their progress at midterm. The students also claimed that the formal way of reporting their midterm progress was the best feature of the Academic Alert System.

The faculty members' subjective assessment of the system is supported by the results of the statistical analyses of student data. The Academic Alert System needs to be modified to provide more selective help to specific groups of students. According to the faculty, even though the system opens up communication between faculty and students, the outcome seem to point to a one-way communication from instructors to students and not vice versa. This presents an interesting phenomenon for further investigation. The mid-term progress letters may provide complete and accurate information that does not require further clarification but rather some action on the part of the student. This supports the philosophy underlying the Academic Alert System to help the students become more responsible for their own progress.

VI. CONCLUSIONS

The effectiveness of a computerized Academic Alert System was investigated in this experimental study. The results indicate a positive direction in favor of continuing the system for all

students, particularly in terms of Grade Point Average. More importantly, the results point to a definite step that should be taken to improve the system; that is, the alert messages should be modified to stress the impact of dropping courses on SOAP standing. This emphasis is crucial for new students and black non-hispanic students. If the campuses are able to offer specific coaching and counseling assistance to some of these students who also fall into the "improvement needed" category, this help can be mentioned in the Alert letters.

Beyond the Academic Alert System, the College might wish to examine the penalty for excessive withdrawals. Perhaps a special withdrawal code can be created to distinguish the students who withdraw from a course after an honest but futile attempt to meet its requirements, so that these students need not be penalized for such withdrawals when SOAP standings are computed.

Once the revisions are in place, it will be worthwhile to conduct another study by selecting cohorts of new students and following them through from one semester to another.

Appendix A

JOB-ID EJSACA32 MIAMI-DADE COMMUNITY COLLEGE RUN DATE 01/12/84

ACADEMIC ALERT
PROGRESS ROLL

COURSE	INSTR NAME/ CLASS TIME	STARTING DATE	ENDING DATE	SEQ NUM	PAGE	CAMPUS DIV/DPT
ACC 2001	Instructor's name removed	08/23/83	12/15/83	00107	1 OF 1	200 1 FC

SEQ	STUDENT NAME	STUDENT NO.	PROG	ATEND
1				
2	Students' names & I.D. numbers			
3	are removed intentionally.			
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				

****
* LEGEND *
* **PROGRESS** *
* S = SATISFACTORY *
* I = IMPROVEMENT NEEDED *
* N = NO EVALUATION *
* *
* **ATTENDANCE** *
* S = SATISFACTORY *
* I = IMPROVEMENT NEEDED *
* N = NO SHOW *
* D = DOES NOT APPLY *
* *
****

SIGNATURE

KEYPUNCH - COLUMNS 67-80 FOR PROG CARD PUNCH 01831200001071
KEYPUNCH - COLUMNS 67-80 FOR ATND CARD PUNCH 01831200001072

MIAMI-DADE COMMUNITY COLLEGE
NORTH CAMPUS
11380 N.W. 27 AVENUE
MIAMI, FLORIDA 33167

FEB, 28, 1984

THE NAME AND ADDRESS
OF THE STUDENT HAVE
BEEN REMOVED INTENTIONALLY.

DEAR PEGGY:

WE ARE PLEASED THAT YOU ARE CONTINUING YOUR EDUCATION AT M-DCC. WELCOME BACK. WE WILL CONTINUE TO SHARE INFORMATION WITH YOU EACH MAJOR TERM AND HOPE THAT THIS WILL BE HELPFUL TO YOU.

YOUR CUMULATIVE GRADE-POINT AVERAGE AFTER YOUR LAST SEMESTER OF ATTENDANCE WAS SATISFACTORY. IF YOU FEEL YOU COULD DO BETTER AND WANT HELP, YOU MAY CONTACT AN ACADEMIC ADVISOR IN ROOM 1101, SCOTT HALL, PHONE 685-4424, OR A COUNSELOR IN ROOM 1105, SCOTT HALL, PHONE 685-4424.

ONE OR MORE OF YOUR INSTRUCTORS HAS REPORTED THAT YOUR PROGRESS AND ATTENDANCE IN THE 12 CREDIT HOUR(S) OF COURSEWORK YOU ARE ATTEMPTING THIS TERM NEED TO IMPROVE. TALK THE PROBLEM OVER WITH YOUR INSTRUCTOR(S). YOU MAY WANT TO REDUCE YOU OUTSIDE ACTIVITIES OR YOUR CURRICULUM.

PROGRESS IS SATISFACTORY IN: SSI1120
PROGRESS IS NOT SATISFACTORY IN: ENC1132 PSY1000
ATTENDENCE IS SATISFACTORY IN: PSY1000
ATTENDENCE NEEDS IMPROVEMENT IN: ENC1132 SSI1120

I NOTE THAT YOU INDICATE YOU ARE UNDECIDED ON A MAJOR. ALTHOUGH AN ADVISOR HELPED YOU SELECT YOUR COURSES FOR THIS TERM, YOU MAY WISH TO SEEK THE ASSISTANCE OF A CAREER COUNSELOR IN MAKING A CAREER CHOICE. IF YOU DO, PLEASE COME TO ROOM 1105 OR CALL 685-4424 FOR AN APPOINTMENT.

TAKE THIS LETTER WITH YOU WHEN YOU MEET WITH YOUR ADVISOR, YOUR PROFESSOR, OR YOUR COUNSELOR. BEST WISHES, PEGGY, FOR A SUCCESSFUL TERM.

SINCERELY,

THE FACULTY MEMBER'S NAME
HAS BEEN REMOVED INTENTIONALLY.

Fall 1983 M-DCC Academic Alert Telephone Interview . . . . . **Form A**

Spanish Y/N Telephone #_____

(1-7) _____ ID Number Name _____

Date of calls: _____ 1st _____ 2nd _____ 3rd

(8) _____I. Which of the following options best characterizes your feelings about your progress this term at this time?

1. You are doing better than you expected.
2. You are doing as well as you expected.
3. You are not doing as well as you expected.
4. You don't know how you are doing this term.

(9) ____II. Which of the following methods would you say is most helpful to find out how well you are doing in a term?

1. Your tests and/or reports graded by your instructors
2. Checking with your instructors
3. Getting a midterm progress letter from the college
4. Please mention any other method.

(10) ___III. Do you feel that you have been informed of your progress during this term instead of having to find out at the end of the term?

1. Yes, in all courses
2. Yes, in some courses
3. No, not in any course

(11) ____IV. Have you received the midterm progress letter this term?

1. Yes
2. No

If student answers 1 to question IV:

(12) _____V. Do you feel the college should continue to send the midterm progress letters?

1. Yes
2. No

(13) ____VI. Why do you think so?

(14) ___VII. Any other comments you wish to make?

Fall 1983 M-DCC Academic Alert Telephone Interview . . . . . **Form B**

Spanish Y/N Telephone #_____

(1-7) _____ ID Number Name _____

Date of calls: _____ _____ _____
1st 2nd 3rd

(8) _____I. Which of the following options best characterizes your feelings about your progress this term at this time?

1. You are doing better than you expected.
2. You are doing as well as you expected.
3. You are not doing as well as you expected.
4. You don't know how you are doing this term.

(9) ____II. Which of the following methods would you say is most helpful to find out how well you are doing in a term?

1. Your tests and/or reports graded by your instructors
2. Checking with your instructors
3. Getting a midterm progress letter from the college
4. Please mention any other method.

(10) ___III. Do you feel that you have been informed of your progress during this term instead of having to find out at the end of the term?

1. Yes, in all courses
2. Yes, in some courses
3. No, not in any course

(11) ____IV. Have you received midterm progress letters in previous terms?

1. Yes
2. No

If student answers 1 to question IV:

(12) _____V. Do you feel the college should continue to send the midterm progress letters?

1. Yes
2. No

(13) ____VI. Why do you think so?

(14) ___VII. Any other comments you wish to make?

MIAMI-DADE COMMUNITY COLLEGE
RSVP Academic Alert Evaluation

DIRECTIONS: Please write the number of your response choice on the line next to the question.

____ I) CAMPUS:

1) North
2) South
3) New World Center
4) Medical Center

____ II) YOUR TEACHING DISCIPLINE/AREA:

1) Developmental Studies
2) Business
3) Data Processing
4) Humanities
5) Social Science
6) Science
7) Allied Health
8) Technical
9) Other (Please specify) _____

____III) YOUR TEACHING STATUS:

1) Full-time
2) Part-time

____ IV) NUMBER OF YEARS OF TEACHING **COMPLETED** AT MIAMI-DADE COMMUNITY COLLEGE:

1) Less than 1 year
2) 1 to 3 years
3) 4 to 7 years
4) 8 to 10 years
5) 11 to 15 years
6) more than 15 years

____ V) YOUR STUDENTS ARE PRIMARILY:

1) New students
2) Continuing students
3) Both new and continuing students

____ VI) The RSVP Academic Alert and Advisement system was instituted in 78-1, and midterm progress letters have been sent every major term since then to all credit students.

HOW MANY OF THESE 11 MAJOR TERMS (INCLUDING THIS ONE) HAVE YOU BEEN INVOLVED IN PROVIDING PROGRESS ROLL INFORMATION?

1) 1 or 2 terms
2) 3 or 4 terms
3) 5 or 6 terms
4) 7 or 8 terms
5) 9 or 10 terms
6) all 11 terms

___VII) APPROXIMATELY WHAT PERCENTAGE OF ALL YOUR STUDENTS IN ALL COURSES THIS TERM ASKED FOR CLARIFICATION OF THEIR ACADEMIC ALERT LETTERS?*

1) no one asked
2) less than 5%
3) 5 to 10%
4) 11 to 15%
5) 16 to 25%
6) 26 to 50%

(*Remember, this term we are conducting an experimental study in which only half of the students received Academic Alert letters.)

___VIII) APPROXIMATELY WHAT PERCENTAGE OF ALL YOUR STUDENTS THIS TERM ASKED WHY THEY DID NOT GET THEIR ACADEMIC ALERT LETTERS?

1) no one asked
2) less than 5%
3) 5 to 10%
4) 11 to 15%
5) 16 to 25%
6) 26 to 50%

____ IX) WHAT IS YOUR RECOMMENDATION CONCERNING THE CONTINUATION OF THE ACADEMIC ALERT AND ADVISEMENT SYSTEM?

1) Continue as is for all students
2) Continue as is for certain students
3) Continue with modifications for all students
4) Continue with modificatons for certain students
5) Discontinue

____ X) WHAT, IN YOUR PERCEPTION, ARE THE STRENGTHS OF THE ACADEMIC ALERT SYSTEM?

_____

_____

_____

_____

____ XI) WHAT, IN YOUR PERCEPTION, ARE THE WEAKNESSES OF THE ACADEMIC ALERT SYSTEM?

_____

_____

_____

_____

THANKS SO MUCH FOR YOUR TIME!
Return your completed questionnaire to
Ed Duffy by November 2, 1983.

ERIC® CLEARINGHOUSE FOR
JUNIOR COLLEGES
UNIVERSITY OF CALIFORNIA

AUG 3 1984

8118 Math-Sciences Building
Los Angeles, California 90024